sexual pleasure vibrator technology:

It is possible that other kinds of acoustics cause a wave overlap per unit time that causes greater intensity of sensation for a given amount of motor vibration; the benefit of this is that if the sensation from a particular vibration form overlap is twice as strong, and pleasurable

to the person using the vibrator with the same amount of energy then you can use half the amount of energy and the batteries last twice as long; compare the strumming frequency of fingering to orgasm, which at erotic video looks like 2-3 major wiggles/second superimposed on the basic waveform of the (very successful at erotic

video Hitachi Magic Wand), so it the wand head could strum 1-2-3 cm wide 3 times a second while also vibrating

similarly, instead of simple sinusoidal waves ~~~, other PQRS waveforms like, if you were going to engineer it, find the three highest rated sexual pleasure vibrators on amazon,

record their waveforms, then superimpose them; change the amplitude (volume) of each at a separate channel on the research test vibrators;

alternatively have a vibrator element that can handle a really wide vibrational frequency range, then have a phone app that has settings for the 11 most highly rated sexual pleasure vibrators

at amazon; make sure the vibrational element can do that frequency range, and verify that it is as pleasureable as the orginals; then have the phone app be able to remix the top 11 vibrator frequencies to find, quite possibly, even more pleasureable combined stimulations.

Since it is a phone app, the IoT bluetooth wifi

sexual pleasure vibrator can tell the internet at a crowdsourced site, which new frequencies are even more pleasurable than the top 11 vibrators at amazon, as their functionalikes. If enough people use it, then genetic algorithms and deep learning AI can make up new highly likely to be even more pleasurable vibrations from a sample of just 110K (and the sample size is likely to be much larger than that).

Bullet vibrators on alibaba are 25-29 cents, but a piezoelectric speaker with two wire leads is 1 cent.
Subwoofers at alibaba are 50-85 cents, with a frequency range of 20Hz —200Hz;

It is better to make the

new piezo-spheroidal or piezo-coated-breadstick .1Hz-20k Hz vibrating element, but I do not know if Piezo can go below 100Hz. sexual pleasure vibrator

So the alibaba range is 1 cent to 76 cents (Pizeo element + Bullet vibrator+subwoofer); alibaba range 1-10 cents if the Spheroidal piezo element and the

breadstick piezoelement areeasy to make.

Notably, with a piezo element, it does not have to be flat and directional if it is reengineered; a piezo ceramic coating could be produced on a spheroidal, or even breadstick (long vibrations; possible vaginal insertion activity) shape at a sexual pleasure vibrator;

Note, the internet says of piezoelectric speakers, "little energy required at low frequencies" suggesting that reengineering the piezoelectric speaker to do .1-200Hz, and thus also make the .1Hz -20,000 Hz sexual pleasure vibrator functional would make sexual pleasure vibrators last longer per battery fill

up.

Dancing solar flower magnetics: alternate magnetic windings make .1-10Hz look good; The "dancing solar flowers" I have seen seem to have a 1-3 Hz frequency, and a 3D autoorbital pattern of actuated motion; so, a 100 Hz and up piezeoelectric combined with a 1-100 Hz dancing

flower winding, but stronger power could vibrate from 1Hz-20K Hz; also for frequencies .1-1 Hz, that could just be switching the dancing flower to "thump on the side" mode anything from once every 10 seconds to once per second;

Another item that benefits the energy efficiency and battery life

of sexual pleasure vibrators is the possible use of acoustic lenses: Perhaps something internal to the vibrator and possibly fresnel made out of plastic could focus vibrations onto superactive spots on the surface of the vibrator.

At a Wand vibrator, where the ergonomically easy to use or not-use 3/4 of the way up the

head has an acoustic lens at it internally; right at that spot it would be like the vibrator was turned up to High, or if already on high, it goes to 11 (higher), but is easy to skip using if not preferred.

An alternative to a lens is the very simple idea of putting a vibrator inside a vibrator; some bullet vibraotrs are about the size of the Hltachi Magic wand's head, so it could be just like a regular hitachi magic wand, but with the option of turning on the embedded bulled vibrator in the head; aslo as a manufactured item it is likely the bullet could be 1/2-1/4 its usual package size when contained at the head of a wand vibrator; Also, if you run magic wand at half power, and bullet

vibrator at half power, you get full power of vibration for sexual stimulation, but with a much wider, customizable frequency range, as previously mentioned.

Some 2020 people on amazon preferred powerful but very quiet sexual pleasure vibrators; GA; GA breadstick and spheroid;

There is an outside possibility that a VGA camera (10c), and piezospeakers (1-10 cents; dollar store headphones, but more powerful) could dynamically air at the users head area to do active noise cancellation; some active noise cancellation is possible without Cm resolution; the Bose system (RNC) for automotive vehicles

makes the entire car cabin quiet without aiming for the ears; Aiming for the ears is more energy effcient though, and 10 (alibaba) cents of VGA (2020) camera and 2-10 (alibaba) cents of piezoelectric speakers, and the IC in noise cancelling headphones (25 cents) (or, a big IC, \$.01-\$1)could do it.

one person on amazon complained her vibrator "Add pressure and it loses power" which suggets that an improvement to sexual pleasure vibrators is a 1c CPU/micorcontroller that maintains not just constant current and voltage, but, sensing (at the power output winding) (3 wires not 2) the kinds of things that happen to a piezo

element, motor/linear actuator, dancing flower or subwoofer when you hold it firmly variously slight, mostly, or completely still (voltage ripple and voltage nonripple at the winding); Then when you pressed it against yourself theoutput would remin high and uniform.

One version:

solar flower (.1-20Hz 15c Quadrupled for stronger wire 60c, 50c 20-200 Hz subwoofer, 200-20KHz piezo vibrating element, 50 c noise cancelling chip, 10 1c piezo antispeakers for noise cancellation,

Or the cheap way: 15c quadrupled winding dancing flower, 60c 25 cent bullet vibrator 2*10c custom breadstick or spheroid piezo speaker 25 cent noise cancelling headphones 10 IoT module bluetooth/phone \$1.40

.1-20,000 Hz App driven noise cancelled vibrator with superimposable frequencies for greater sexual pleasure.